

## AMENDMENTS TO THE CLAIMS

**This listing of claims will replace all prior versions and listings of claims in the application:**

### LISTING OF CLAIMS:

1. (canceled).

2. (currently amended): A set of oligonucleotide probes, wherein said set consists of not more than 1000 oligonucleotide probes and said set comprises each of the following 351 oligonucleotides having the sequences as set forth in

SEQ ID Nos. 1, 2, 3, 4, 5, 11, 12, 13, 19, 25, 31, 32, 33, 34, 36, 37, 39, 45, 46, 47, 48, 50, 55, 56, 60, 61, 64, 66, 68, 73, 74, 75, 76, 77, 78, 80, 83, 85, 86, 90, 96, 98, 99, 100, 101, 105, 106, 107, 109, 111, 114, 115, 116, 117, 119, 120, 121, 122, 123, 124, 125, 127, 128, 130, 131, 132, 133, 135, 136, 137, 138, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 161, 162, 163, 165, 166, 168, 169, 171, 173, 174, 175, 176, 177, 178, 179, 180, 182, 183, 185, 186, 187, 190, 191, 195, 197, 198, 199, 200, 202, 204, 206, 207, 210, 212, 214, 216, 217, 218, 219, 220, 221, 222, 224, 225, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 243, 244, 245, 249, 251, 256, 258, 259, 260, 261, 262, 267, 268, 270, 272, 273, 274, 275, 276, 278, 279, 280, 282, 284, 286, 287, 289, 291, 292, 295, 296, 297, 298, 299, 301, 303, 305, 307, 308, 309, 310, 311, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 351, 352, 353, 355, 356, 357, 359, 361, 363, 364, 365, 366, 367, 368, 369, 370, 371, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390,

391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 457, 458, 459, 460, 461, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 484, 487, 489, 490, 496, 497, 498, 499 and 501,

with the proviso that at least one of said 351 oligonucleotides may be replaced, wherein the one of said 351 oligonucleotides may be replaced with either (i) an oligonucleotide fragment of the one of said 351 oligonucleotides being replaced, which fragment is at least 30 nucleotides in length, (ii) an oligonucleotide having a sequence entirely complementary to the one of said 351 oligonucleotides being replaced, or to a fragment thereof which is at least 30 nucleotides in length, or (iii) an oligonucleotide having at least 80% identity to the one of said 351 oligonucleotides being replaced or to a fragment thereof which is at least 30 nucleotides in length, wherein oligonucleotides having the sequence set forth in SEQ ID Nos. 117, 127, 137, 138, 147, 169, 178, 225, 231, 272, 278, 310, 329, 335, 339, 346, 352, 361, 386, 387, 399, 420, 429, 469, 472, or 477 may only be replaced by an oligonucleotide having a sequence entirely complementary to the one of said oligonucleotides being replaced or by an oligonucleotide having at least 80% identity to the one of said 351 oligonucleotides being replaced.

3. (canceled).

4. (previously presented): The set of oligonucleotide probes as claimed in claim 2, wherein each probe in said set binds to a different transcript.

**5. (previously presented):** The set as claimed in claim 2, wherein said set consists of not more than 500 oligonucleotide probes.

**6-8. (canceled).**

**9. (previously presented):** The set of oligonucleotide probes as claimed in claim 2, wherein said probes are immobilized on one or more solid supports.

**10-12. (canceled).**

**13. (previously presented):** A kit comprising a set of oligonucleotide probes as claimed in claim 2 immobilized on one or more solid supports.

**14-15. (canceled).**

**16. (withdrawn):** A method for determining the gene expression pattern of a cell, comprising at least the steps of:

- a) isolating mRNA from said cell, which may optionally be reverse transcribed to cDNA;
- b) hybridizing the mRNA or cDNA of step a) to a set of oligonucleotide probes as defined in claim 2; and

c) assessing the amount of mRNA or cDNA hybridizing to each of said probes to produce said pattern.

**17. (withdrawn):** A method of preparing a standard gene transcript pattern characteristic of a disease or condition or stage thereof in an organism comprising at least the steps of:

a) isolating mRNA from the cells of a sample of one or more organisms having the disease or condition or stage thereof, which may optionally be reverse transcribed to cDNA;

b) hybridizing the mRNA or cDNA of step a) to a set of oligonucleotide probes as defined in claim 2 specific for said disease or condition or stage thereof in an organism and sample thereof corresponding to the organism and sample thereof under investigation; and

c) assessing the amount of mRNA or cDNA hybridizing to each of said probes to produce a characteristic pattern reflecting the level of gene expression of genes to which said oligonucleotide probes bind, in the sample with the disease, condition or stage thereof.

**18. (withdrawn):** A method of preparing a test gene transcript pattern comprising at least the steps of:

a) isolating mRNA from the cells of a sample of said test organism, which may optionally be reverse transcribed to cDNA;

b) hybridizing the mRNA or cDNA of step a) to a set of oligonucleotide probes as defined in claim 2 specific for a disease or condition or stage thereof in an organism and sample thereof corresponding to the organism and sample thereof under investigation; and

c) assessing the amount of mRNA or cDNA hybridizing to each of said probes to produce said pattern, which reflects the level of gene expression of genes to which said oligonucleotide probes bind, in said sample.

**19. (withdrawn):** A method of diagnosing or identifying or monitoring a disease or condition or stage thereof in an organism, comprising the steps of:

- a) isolating mRNA from the cells of a sample of said organism, which may optionally be reverse transcribed to cDNA;
  - b) hybridizing the mRNA or cDNA of step a) to a set of oligonucleotide probes as defined in claim 2 specific for said disease or condition thereof in an organism and sample thereof corresponding to the organism and sample thereof under investigation;
  - c) assessing the amount of mRNA or cDNA hybridizing to each of said probes to produce a characteristic pattern reflecting the level of gene expression of genes to which said oligonucleotide probes bind in said sample; and
  - d) comparing said pattern to a standard diagnostic pattern prepared by
- i) isolating mRNA from the cells of a sample of one or more organisms having the disease or condition or stage thereof, which may optionally be reverse transcribed to cDNA;
  - ii) hybridizing the mRNA or cDNA of step i) to said set of oligonucleotide probes;
- and
- iii) assessing the amount of mRNA or cDNA hybridizing to each of said probes to produce a characteristic pattern reflecting the level of gene expression of genes to which said oligonucleotides bind, in the sample with the disease, condition or stage thereof, wherein the sample is from an organism corresponding to the organism and sample under investigation,

to thereby determine the degree of correlation indicative of the presence of said disease or condition or a stage thereof in the organism under investigation.

**20-22. (canceled).**

**23. (withdrawn):** The method as claimed in claim 17, wherein said disease is breast cancer.

**24-27. (canceled).**

**28. (withdrawn):** The method as claimed in claim 17, wherein said pattern is expressed as an array of numbers relating to the expression level associated with each probe.

**29. (withdrawn):** The method as claimed in claim 17, wherein said organism is a eukaryotic organism, preferably a mammal.

**30. (withdrawn):** The method as claimed in claim 29 wherein said organism is a human.

**31. (canceled).**

**32. (withdrawn):** The method as claimed in claim 17, wherein said disease is cancer or a degenerative brain disorder.

**33. (withdrawn):** The method as claimed in claim 17, wherein said sample is tissue, body fluid or body waste.

**34. (withdrawn):** The method as claimed in claim 17, wherein said sample is peripheral blood.

**35. (withdrawn):** The method as claimed in claim 17, wherein the cells in the sample are not disease cells, have not been in contact with such cells and do not originate from the site of the disease or condition.

**36-37. (canceled).**